

<b>PRE-APPEAL BRIEF REQUEST FOR REVIEW</b>		Docket Number (Optional)  84337-US1
	Application Number 09/544,344-Conf. #8024	Filed April 6, 2000
	First Named Inventor Arthur W Snow et al.	
	Art Unit 1743	Examiner A. Soderquist
<p>Applicant requests review of the final rejection in the above-identified application. No amendments are being filed with this request.</p> <p>This request is being filed with a notice of appeal.</p> <p>The review is requested for the reason(s) stated on the attached sheet(s). Note: No more than five (5) pages may be provided.</p> <p>I am the</p> <div style="display: flex; justify-content: space-between;"> <div style="width: 60%;"> <p><input type="checkbox"/> applicant /inventor.</p> <p><input type="checkbox"/> assignee of record of the entire interest. See 37 CFR 3.71. Statement under 37 CFR 3.73(b) is enclosed. (Form PTO/SB/96)</p> <p><input checked="" type="checkbox"/> attorney or agent of record. Registration number <u>46,746</u></p> <p><input type="checkbox"/> attorney or agent acting under 37 CFR 1.34. Registration number if acting under 37 CFR 1.34. _____</p> </div> <div style="width: 35%; text-align: center;"> <p>_____ /Joseph T. Grunkemeyer/ Signature</p> <p>_____ Joseph T. Grunkemeyer Typed or printed name</p> <p>_____ (202) 404-1556 Telephone number</p> <p>_____ December 21, 2006 Date</p> </div> </div> <p>NOTE: Signatures of all the inventors or assignees of record of the entire interest or their representative(s) are required. Submit multiple forms if more than one signature is required, see below*.</p>		
<input type="checkbox"/> *Total of <u>1</u> forms are submitted.		

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In the application of: Snow et al.

Serial No.: 09/544,344

Filed: 04/06/2000

For: MATERIALS, METHOD AND APPARATUS FOR DETECTION AND MONITORING  
OF CHEMICAL SPECIES

Examiner: Soderquist, Arlen

Art Group Unit: 1743

Honorable Commissioner of Patents

PO Box 1450

Alexandria, VA 22313-1450

December 21, 2006

PRE-APPEAL BRIEF REQUEST FOR REVIEW

Sir:

This request is in response to the office action of 09/26/2006. It is submitted with an amendment and a notice of appeal.

Claims 1, 2, 4, 6-9, 21, 22, 25-29, 31-38, 40-45, and 47-55 are pending in the application. No claims are presently allowed.

Claim Interpretation

The Examiner has interpreted the language in the claims as excluding coupling agents from the ligand shell molecules. This is correct. But regardless of this interpretation, the claims do not exclude coupling agents on the particles as other than ligand shell molecules. The coupling agents may be bound to the core in addition to the ligand shell molecules.

The Examiner analogized applicants' claim interpretation to arguing that in a room having the instant inventors and applicants' representatives therein, only the inventors are present. However, a more correct analogy is a room (ligand shell) having inventors (ligand shell molecules) that are not applicants' representatives (coupling agents). Optionally, applicants' representatives (coupling agents) may also be present. The claims require molecules of a type A that are not of a type B. This does not mean that type B molecules are excluded.

A better analogy would be meatballs (core) coated in a sauce (ligand shell, ligand shell molecules) that are stuck together with toothpicks (coupling agents). The recipes for the meatballs and sauce do not contain toothpicks. The assembly has toothpicks penetrating the sauce. Yet nobody would consider the sauce to be made of toothpicks.

#### Claim Objections

Claim 30 has been objected to. Applicants will cancel this claim upon allowance of the other claims or at the next such opportunity. Applicants also authorize an Examiner's amendment canceling this claim. (No amendment may be submitted with this request.)

#### Claim Rejections – 35 U.S.C. § 112

Claims 1, 2, 4, 6-9, 21, 22, 25-29, 31-38, 40-45, and 47-55 have been rejected under 35 U.S.C. § 112, first paragraph as allegedly failing to comply with the enablement requirement. The Examiner stated that, according to the specification, the solution casting and slow evaporation method does not produce an acceptable film, but that the spraying method of claim 28 does. The Examiner also stated that the layer-by-layer method was excluded from the scope of the claims.

Firstly, the layer-by-layer method and product made thereby are not excluded from the scope of the independent claims. As explained above, the claims cover particles both with and without coupling agents.

As to claims 1, 2, 4, 6-9, 21, 22, 25, 26, 33-38, 40-45, and 47-55, these are product claims. It appears that the Examiner would withdraw the rejection if these claims were limited to the spraying process. This would make them product-by-process claims. However, a product-by-process claim is not limited to products made by the recited process. Reciting the spraying process in these claims would not actually change the scope of the claim.

“As long as the specification discloses at least one method for making and using the claimed invention that bears a reasonable correlation to the entire scope of the claim, the enablement requirement of 35 U.S.C. 112 is satisfied.” MPEP 2164.01(b). Here, the specification discloses at least two processes. The spraying process is suitable for couple agent-free particles. The layer-by-layer method is suitable when a coupling agent is used. The fact that other methods exist that either fail to make the claimed product or that make the claimed

product less than optimally does not bear on whether the specification teaches at least one method that does produce the claimed product. (“Failure to disclose other methods ... does not render a claim invalid.” MPEP 2164.01(b)) The fact that other methods may be disclosed does not change the enablement analysis of product claims.

The Examiner stated that “that instant claim format ... covers a structure made by a process [solution coating] that the instant specification clearly teaches as not suitable for the intended purpose.” Office action of 09/26/2006, page 5, lines 21-23.) This sentence admits that the structure made by the coating method is enabled. If the claim covers a structure made by process taught in the specification, then the claimed structure is enabled (assuming that the structures made by solution coating and spraying are different). The fact that the process may produce less than optimal results does not bear on enablement. Further, the only evidence that the structures made by the two methods would be different is limited to the reproducibility and uniformity of the film (page 17, lines 9-11). However, the present claims are not limited to any degree of reproducibility or uniformity.

As to claims 27 and 29, 31, and 32, these are method claims. As stated above, the independent claim covers particles both with and without coupling agents. The specification discloses the spraying method and the layer-by-layer method as possible methods of “depositing on a substrate ... a thin film of a multiplicity of particles in a three-dimensional close-packed orientation,” as recited in claim 27. The specification also discloses a solution casting method. Page 17, lines 9-11. The Examiner stated that this part of the specification teaches that this method does not produce an acceptable film. However, the specification actually says that the method “does not produce a thin film with reproducibility and acceptable uniformity.” It does however, produce a film that is within the scope of “a thin film of a multiplicity of particles in a three-dimensional close-packed orientation,” as recited in the claim. Even if such a film were unacceptable, “the presence of inoperative embodiments within the scope of a claim does not necessarily render a claim nonenabled.” MPEP 2164.08(b).

Claims 1, 2, 4, 6-9, 21, 22, 25-29, 31-38, 40-45 and 47-55 have been rejected under 35 U.S.C. § 112, second paragraph as being allegedly indefinite for failing to particularly point out and distinctly claim the subject matter which Applicants regard as the invention. The Examiner stated that the scope of the tail is unclear, because it could include a carboxylate group (as recited

in claims 37, 40, and 50), which could bond to an aluminum substrate, while the claims also recite that the tail has a structure and composition designed to provide additional stabilization of metal clusters against irreversible agglomeration.

The independent claims do not recite specific metals for the core or materials for the substrate. Any combination of core, substrate, and tail that meets the recited limitations is within the scope of the claims. Thus, if an aluminum substrate were used, than carboxylate may be excluded from the tail. But carboxylate may be appropriate for other types of substrates. It is known in the art which functional groups will bond to which metals, so there is no indefiniteness.

Although both aluminum and carboxylate are both possible embodiments of their respective limitations, the claim language “stabilization of metal clusters against irreversible agglomeration” is a limitation on the allowable combinations of metal and tail group. A person of ordinary skill in the art would recognize that the quoted language removes the aluminum-carboxylate combination from the scope of the claim, though each might be covered in other combinations.

In view of the foregoing, it is submitted that the application is now in condition for allowance.

In the event that a fee is required, please charge the fee to Deposit Account No. 50-0281, and in the event that there is a credit due, please credit Deposit Account No. 50-0281.

Respectfully submitted,

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